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ABSTRACT

Approval plans are widely used in academic libraries to acquire current books soon after publication without time-consuming, costly title-by-title ordering. However, return rates of unselected books to the approval plan vendor are sometimes unacceptably high. Wright State University Library attempted to moderate their high approval return rates by fine-tuning their domestic approval plan subject profiles. After presenting a brief overview and literature review of the evaluation of approval plans, this paper describes a two-phase observational study undertaken at Wright State University Library to investigate before and after reprofiling return rates in order to explore the possibility that a relationship existed between subject areas and the number of books rejected. Science and engineering subject areas were found to be heavily represented in the rankings of subjects with the highest return rates both before and after reprofiling, and although most of the highest return rates were reduced following reprofiling, they still generally remained quite high. However, the return rates for most subject areas were poor both before and after reprofiling. While a trend may have been indicated, internal factors that appeared to come into play (for example, whether all books were reviewed and the questionable accuracy and appropriateness of the profiles themselves) made the researcher hesitate to assert a definitive connection. Samples of Baker & Taylor Management and Activity Reports and statistical tables are appended. (Contains 55 references.) (Author/KRN)

AN INVESTIGATION OF DOMESTIC APPROVAL PLAN RETURN RATES BY ACADEMIC SUBJECTS BEFORE AND AFTER SUBJECT REPROFILING AT A MEDIUM-SIZED ACADEMIC LIBRARY

A Master's Research Paper submitted to the
Kent State University School of Library Science
in partial fulfillment of the requirements
for the degree Master of Library Science

by

Ida L. Herbert

April, 1991

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Master's Research Paper by

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INTRODUCTION

Statement of the Problem

Approval plans are widely used in academic libraries to acquire current books soon after publication without time-consuming, costly title-by-title ordering. However, return rates of unselected books to the approval plan vendor are sometimes high and deemed unacceptable. Even after "fine-tuning" the library's subject area profiles in an effort to pull in more appropriate titles, some studies have suggested that some subject areas still may experience high returns.

Wright State University Library has experienced a dramatic increase in return rates of approval items in recent years. In the Spring of 1990, WSU library staff and faculty representatives met for reprofiling sessions to fine-tune the subject profiles for domestic vendor Baker and Taylor's approval plan with the hope of ameliorating this problem.

Need for the Study

In the 1960s the approval plan came into prominence. Most academic libraries in the United States received materials budget increases in the late 1950s and early 1960s.[1] However, many

[1] "Between the 1961/62 and the 1970/71 school years there was a 30 percent increase in the number of college and university libraries, and the number of volumes acquired each year by academic libraries rose 150 percent" (Ford 1978, 87).

libraries were not able to add staff to keep pace with their increased acquisitions budgets. Blanket orders and approval plans developed as ways of increasing collections quickly and libraries were encouraged to use such plans particularly when their selection process was at the point where decisions on individual titles had become perfunctory, or when the usual budget seemed to be quite adequate for purchasing current publications.

Although library materials budgets have not remained as ample as they were briefly in the 1960s, approval plans have remained a major activity in acquisitions in many libraries.[2] The approval plans now in use, however, are usually based on more sophisticated profiling techniques and computer-controlled subject matching. In developing a profile which accurately reflects collection priorities, the staff involved must decide whether to emphasize the subject or publisher, whether to focus on essential or nonessential needs and whether to receive notification slips or the books themselves. A poorly developed profile can, and often does, lead to a high rejection and return rate of titles received on approval. However, there may also be some subject areas which by their nature are not inherently well-suited to traditionally formulated approval plan profiling methods.

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[2]The Association of Research Libraries (ARL) conducted a survey of its members in 1987 and found that 93.6 percent of the respondents were using approval plans (Association of Research Libraries 1988, 6).

Only limited study has been done in this particular area and it was to add to that small body of knowledge that this study was undertaken.

Limitations

This study was limited to the Wright State University Library and to its approval plan account with Baker & Taylor on which books were received both from direct, automatic shipment of books matching WSU's approval plan profiles and from books sent for review in response to the submission of notification slips which had been received announcing the books' availability.

Description of Wright State University and Its Library

Wright State University is a state-assisted university accredited by the North Central Association of Colleges and Schools. It was founded in 1964 and at the time of this study had a student population of over 17,000 and offered more than 100 undergraduate majors, 27 master's degree programs, and programs of study for the M.D., Psy.D., and a Ph.D. in computer science and engineering.

Wright State University's mission statement proclaims dedication to advancing and disseminating knowledge through the pursuit of excellence in teaching, research, and professional service. In support of this mission, the university library strives to acquire, organize, and make readily available a collection of

recorded knowledge that supports the instructional, research, and service goals of the university's faculty, students, and staff.

In 1964, when Allyn Hall was the only building on the Wright State campus, the library occupied the first floor of that building. In 1966, as the campus expanded, the library was moved to the first floor and basement of Millett Hall. In 1973, the present library building was completed, and the new addition completed in 1988 doubled the available shelving and study space. At the time of this study, the library's collection included more than 400,000 books, 700,000 microforms, 4,000 periodical subscriptions, and 35,000 maps.

Description of Wright State University Library's Approval Program

Beginning in 1976, Wright State University Library established an approval program arrangement with the Baker & Taylor Company, a large bookjobber, to receive automatic weekly shipments of current academic books available in the United States from all types of scholarly publishers. The specific titles sent are based on a profile of library needs: a description of the particular subjects and types of books needed to support the university curriculum and the major research, study and teaching interests of the faculty, students, and other library users. This profile was originally developed by the faculty representatives (usually the departmental chairperson or the

library liaison) working with the university librarians, with the assistance of an academic librarian from Baker & Taylor.

The Program includes academic level books from commercial publishers, university presses, university departments, and professional and scholarly societies. These titles are identified and classed by subject librarians within Baker & Taylor, and those books that match the library's profile are shipped on approval, i.e., the university has the privilege of returning any book it judges unsuitable for its needs. The books are received weekly and displayed on the Approval Shelves in the Acquisitions Department of the Main Library. All faculty members are invited to review these new book shipments, request notification of availability on any books of particular interest, and specify which books they feel are not appropriate for the library collection. Likewise, university librarians who have been appointed to act as liaisons with faculty in particular departments are also encouraged to review the books and to select, particularly at the undergraduate level.

In addition to the automatic book shipments, the library also receives announcements called notification slips of other recently published books which may be of interest to the library. These slips are routed to each academic department liaison by subject, and anyone who wishes to have any of these books ordered for review for the library signs his or her name on the slip and returns it to the Acquisitions Department of

the library. These slips are forwarded to B & T, and the requested books (from the notification slips) are then included with subsequent automatic shipments and are subject to the same review and approval procedure.

Description of Baker & Taylor's Management Reports

Baker & Taylor provides a two-part Management Report (see Figure 1) for their approval programs. Part I reports the plan activity by subject, is arranged in eleven columns, and gives the following information (by column): (1) LC subject class designator, (2) subject descriptor (based on curricular and publishing patterns, not LC subject heading terms), (3) number of books shipped, (4) total list price for books shipped in each category, (5) net price for books shipped in each category, (6) average net price per book shipped in each category, (7) number of books shipped which were ordered from notification slips, (8) percentage of books shipped which were ordered from notification slips, (9) number of books returned to Baker & Taylor, (10) percentage of books returned to Baker & Taylor, and (11) comments.

Part II--Returned Books--shows specifically why books were returned (this assumes that when the library returns a book they indicate the reason for return). The "Return Reason" part of the report uses alphabetic codes A-T which correspond to the numeric codes printed on the reverse of the green copy

ACCT U802108 WRIGHT STATE UNIV ATTN: KATHY O'GORMAN

RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR WRIGHT STATE 11 RPT-PERIOD JUL-89 THRU DEC-89

STATION	SUBJECT	DESCRIPTOR	SHP=QTY	LST=PRC	NET=PRC	AVG=NET	SLP=ORD	PCTG	RTRND	PCTG	COMM
N	ART MEDIA (GENERAL)		1	24.95	20.46	20.46					
ND	COLOR IN ART MEDIA		3	72.85	59.74	19.91					
NB	SCULPTURE		4	179.90	147.52	36.88					
NB	INDIVIDUAL SCULPTORS AND		2	119.95	98.36	49.18	1	50.0	1	50.0	
NC	DRAWING		2	106.95	87.70	43.85			1	50.0	
NC	DRAWING BY INDIVIDUAL ART		3	116.85	95.82	31.94					
NC	ILLUSTRATIONS OF BOOKS		1	39.95	32.76	32.76					
ND	ILLUMINATION OF BOOKS AND		1	40.00	32.80	32.80			1	100.0	
ND	PAINTING OF SPECIFIC SUBJ			.00	.00				1		
ND	LANDSCAPE PAINTING		2	105.00	86.10	43.05			1	50.0	
ND	INDIVIDUAL PAINTERS AND T		10	596.95	489.50	48.95			3	30.0	
ND	INDIVIDUAL PAINTERS - 20T		12	561.40	460.35	38.36			9	75.0	
NE	PRINT MAKING		7	390.45	320.17	45.73			1	14.2	
NE	SERIGRAPHY		1	95.00	77.90	77.90					
	NONRETURNABLE SUMMARY			.00	.00						
	NOTIFICATION SLIP SUMMARY		1	24.95	20.46	20.46	1	100.0			
	TOTAL N ART MEDIA		49	2,450.20	2,009.18	41.00	1	2.0	18	36.7	

Figure 1. Baker & Taylor Management Report

ACCT U802108 WRIGHT STATE UNIV *** MANAGEMENT REPORT *** RPT-PERIOD JUL-89 THRU DEC-89

N ART MEDIA SHPD 49 R-N-SLIP-ORDS 1 PCT-R-N 2.0 RTRN-QTY 18 RTRN-PCTG 36.7

*** RETURN REASON *** *** RETURN CODE DISTRIBUTION ***

A		E		I		M		Q	A01	9	C01	18	E01	16	F03		G05		H07		I06		J06	
B		F	7	J		N		R	A02	9	C02		E02	2	F04		G06		H08		I07	6	J07	1
C		G	3	K	1	O		S	A03		C03		E03		F05				H09		I08	1	J08	
D		H		L		P		T	A04		C04		E04		F06		H01						J09	
													E05				H02		I01	9	J01	10	J10	
									B01	16	D01	18	E06		G01	14	H03		I02	1	J02		J11	2
									B02		D02				G02		H04		I03		J03		J12	
									B03		D03		F01		G03	5	H05		I04		J04		J13	
									B04		D04		F02		G04		H06		I05		J05	5		

of the bibliographic data form supplied with each book shipped, a copy of which is included with each book returned (see Figure 2). This part of the report indicates the number of books returned for each reason. However, since more than one reason may be given for a return, the total in this section may be more than the total number of books returned.

The "Return Code Distribution" section of the report indicates the number of books returned arranged by Baker & Taylor's modifier codes listed on the back of the goldenrod notification slips (see Figure 3). If more than one modifier is used to describe the book (e.g. publishers, physical format, and academic level), the total number revealed here will be greater than the total number of books returned.

In this study, return rates for subject areas were investigated via Baker & Taylor's management reports for a six-month period (July through December 1989) preceding reprofiling and then for the same six-month period in the year following reprofiling (July through December 1990). The same six-month period of each year was studied in an attempt to control for budgetary concerns which might have a more pronounced impact on approval selection at different times during a fiscal year.

Research Objectives

This study investigated the before and after reprofiling return rates for items received on approval by one academic li-

Figure 2. Return reasons used for "Return Reason" section of Baker & Taylor Management Report

INSTRUCTIONS

WHEN RETURNING A BOOK RECEIVED UNDER THE APPROVAL PROGRAM FOR CREDIT, PLEASE ENTER APPROPRIATE CODE(S) IN THE CODE BOX ON THE FRONT OF THIS CREDIT SLIP. THIS WILL GREATLY ASSIST US IN RECOMMENDING PROFILE REFINEMENTS.

PLEASE RETURN THE BOOK WITH THE CREDIT COPY WITHIN 60 DAYS OF RECEIPT.

REASON FOR RETURN

	CODE	
GROUP A DUPLICATES	1	TITLE IS ALREADY IN OUR COLLECTION
	2	TITLE IS ON ORDER
	3	TITLE IS RECEIVED ON ORDER THROUGH A FOREIGN SOURCE
	4	TITLE IS ON STANDING ORDER BY SERIES
	5	TITLE IS ON STANDING ORDER WITH PUBLISHER OR RECEIVED BY ORGANIZATION MEMBERSHIP
GROUP B COLLECTION DEVELOPMENT DECISIONS	6	MATERIAL IS TOO HIGHLY SPECIALIZED
	7	GEOGRAPHIC AREA IS OF LIMITED INTEREST
	8	SPECIFIC TOPIC IS OF LIMITED INTEREST
	9	TREATMENT IS TOO POPULAR
	10	TREATMENT IS TOO LOW LEVEL
	11	SCHOLARSHIP IS POOR
	12	TREATMENT BY THIS PUBLISHER IS UNSATISFACTORY
	13	TEXTBOOK NOT WANTED
	14	READINGS REPRINTED ARTICLES NOT WANTED
	15	UNACCEPTABLE FORMAT
	16	LIBRARY ALREADY HAS ADEQUATE MATERIAL IN THIS SUBJECT
GROUP C SHIPPING	17	VOLUME IS DEFECTIVE DAMAGED
	18	WRONG VOLUME HAS BEEN SENT

PLEASE INDICATE ON THE FRONT OF THE SLIP IF A REPLACEMENT COPY IS WANTED.

FOR REASONS NOT LISTED ABOVE, PLEASE WRITE THE REASON FOR RETURN ON THE FRONT OF THE SLIP

Figure 3. Modifier codes used for "Return Code Distribution" section of Baker & Taylor Management Report

MODIFIER CODES

A PUBLISHERS
Commercial
University Press
University Affiliated
Societies & Associations

B COUNTRY OF PUBLICATION
United States
Canada
Great Britain
Foreign

C LANGUAGE OF PUBLICATION
English
French
Spanish
Other Foreign Lang.

D EDITION
First
Subsequent
Translation
Reprint

E PHYSICAL FORMAT
Hard
Paper
Spiral
Loose Leaf
Multi Media

F CONTINUATIONS
Series Vol 1
Series, Any No
Serials Vol 1
Serials, Any No
Sets Vol 1
Sets Any

G SUBJECT DEVELOPMENT
History
Bibliography
Biography
Legal Aspects
Studies & Teachings
Techniques

H TEXTUAL FORMAT
Lab Manual
Readings
Pictorial Treatment
Directories
Proceedings
Text, Lower
Text, Upper
Programmed Material

I ACADEMIC LEVEL
Undergraduate
Graduate
Professional
General Supplementary
Extra Curricular
Selected Graduate

J GEOGRAPHIC DESIGNATORS
United States
Canada
Latin America
Great Britain
West Europe
East. Europe, USSR
Near East, N. Africa
South-SE Asia
Africa
Far East
Oceania

brary, Wright State University Library, from its domestic approval plan vendor, Baker & Taylor. Compared were Baker & Taylor's management reports analyzing return of approval items by subject area for a six-month period (July through December 1989) preceding reprofiling and for the same six-month period in the year following reprofiling (July through December 1990).

The research hypothesis was that a relationship existed between subject areas and the proportion of books rejected on approval. The independent variables were the various subject areas and the reprofiling or adjustment of approval plan profiles. The dependent variable was the rate of return of rejected items received on approval from B & T.

The study was undertaken to identify subject areas with high approval plan return rates before reprofiling, and then to determine if profile adjustments were sufficient to moderate all subject areas' returns or if some subject areas could be identified as having high rates of return both before and after reprofiling.

BACKGROUND

Literature Review

Overview of Approval Plans

Much of the literature described the approval plans of specific libraries, presented problems experienced, and discussed possible ways of monitoring and improving the efficiency

of approval programs. Major topics addressed in the literature included the controversial issue of responsibility for book selection; advantages, disadvantages, and limitations of approval plans; responsibilities of the vendor; costs; and the long-range impact on library collections. Surveys determined the number of respondents using approval plans, the characteristics of those plans, and the level of satisfaction among librarians and faculty members concerning those approval plans.

Advantages of Approval Plans

Many authors[3] have identified advantages and disadvantages associated with approval plans. In order to facilitate selection, approval programs have been designed to offer the first published, lowest list price for books, ensure that titles are acquired before they go out of print[4], and provide for more accurate evaluation since selection is done with the book in hand. This ease of selection of current titles allows books to be available for use faster, often ahead of reviews, and has the added benefit of freeing subject bibliographers from routine selection,

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[3]among them, Morrison 1969, Schenck 1977, Ford 1978, Stueart 1980, the Association of Research Libraries 1982, Curley 1985, Alessi and Goforth 1987, Magrill and Corbin 1989, and Lockman, Laughrey, and Coyle 1990

[4]This is particularly important since the effect of the Thor Power Tool ruling has been that titles do not remain in print indefinitely.

thus enabling them to devote more time to the acquisition of more esoteric or elusive material.

Approval plans streamline accounting and record keeping functions by eliminating much clerical work involved in the placement of firm orders and by consolidating invoicing and shipping. In addition, approval plans provide a mechanism to avoid duplication of titles received on standing order by series and are able to interface with automated acquisitions systems[5]. All of these factors work together to increase efficiency and speed-up in-house processing of receipts and payments.

Finally, approval plans assist librarians in collection and budget management and decision-making by providing customized reports analyzing sales and returns activity. The information in these reports can point out potential problems with the approval profile or with the review procedure for books and notification slips (and provide the basis for the data analysis done in this research paper).

Disadvantages of Approval Plans

Three general potential problem areas have been associated with approval programs. First, books received on approval

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[5]Such interfaces are accomplished by the vendor supplying tapes representing the titles that are being sent to the library and those tapes are then uploaded into the automated acquisition program.

plans must be selected in most cases prior to the appearance of reviews in scholarly journals or reviewing media, and there may be a tendency to accept rather than to return marginal or questionable items. A second possible problem is that faculty members may tend to withdraw from the selection process, and the work formerly done by faculty must then be transferred to librarians and library staff supported by the library's budget. A final danger lies in the tendency for a library to become too dependent upon a single supplier and to encounter difficulties in switching vendors, particularly in mid-year or at times other than the end of an imprint year.

Summary of Literature Overview of Approval Plans

In general, the literature indicated that approval plans will endure, that their advantages outweigh their disadvantages, that more research and evaluation are needed, and that their effectiveness may be determined to a large degree by the effort exerted by the individual library in maintaining and monitoring them. The responses to the Association of Research Libraries' 1987 survey (Association of Research Libraries 1988) suggested that the main concern for many libraries has shifted from the efficacy of the basic idea of approval plans to identifying exactly which acquisition areas are best suited for approval plans, and developing approval plan policies and procedures which will be effective in those areas.

A few studies suggested possible subject-specific limitations with regard to effective approval programs. At any rate, approval plans need to be thoroughly understood and their possibilities and limitations identified and analyzed. In order for the academic library to reach its book collection goals efficiently, that which is determined not to be done well via approval plans might better be assigned to other methods of acquisition.

Evaluation of Approval Plans

Librarians have conducted many studies over the years in an attempt to assess the degree to which approval plans meet their objectives. Most studies have been informal and have tended to evaluate and compare various vendors in terms of such factors as their bibliographic accuracy, discount offered, timeliness of deliveries, return rates, and profiling procedures. Several studies of approval plans have compared titles received on approval plans with order requests received through traditional methods. Another procedure has been to compare titles received on approval plans with faculty and staff members' ideas of what should have been received. Finally, comparisons have also been made between library circulation statistics for items received from approval plans and materials specifically requested by librarians, faculty and staff.

Studies Evaluating Comprehensiveness and Appropriateness of Approval Profiles

To find out whether an approval plan adds titles different from those which would have been selected through the more traditional methods, some libraries continued to use their usual selection techniques months following the initiation of their approval plan. Requests submitted through traditional channels from librarians and faculty using journal reviews or publishers' announcements were held and eventually checked against approval plan receipts. When it was discovered that many titles requested did not come in on the approval plan, it was determined that the profile probably needed to be revised. Although another possibility could have been that the library needed a more effective jobber that was more attuned to that library's particular needs. One example employing this methodology was the study done by Hulbert and Curry (1978) in a health sciences library. It was found that the number of books received through the approval plan was more than twice the number received due to book reviews and publishers' announcements, and the total staff effort was deemed to be less for the approval plan than for the other methods. It was concluded that the majority of the books needed were obtained through the approval plan and that the approval plan complemented, but did not replace, other methods of book selection.

Another method used to evaluate the appropriateness of a profile and the effectiveness of an approval plan was to select

a sample of titles from trade bibliographies or journal reviews and then have the library staff evaluate that sample in terms of the existing profile designed for the approval plan. The titles judged by the staff to match the profile were then checked against titles actually received on the approval plan. This investigation was useful in pointing out discrepancies in interpretation of a profile and in identifying weak areas of a profile. An example of a study applying a similar methodological design was that done by Moline (1975) who undertook a study at the San Jose State University Library to test "the hypothesis that approval plans supply all current titles expected by the academic library in the area of political science and related subjects" (p. 4). Of the approximately 5,000 Library of Congress proof slips representing books in political science and related areas, 907 were selected as fitting the approval plan profiles and thus expected to be received on approval. The results indicated that, within the time period of the study, 61.4% of the expected titles were actually received. The hypothesis was rejected since the Library did not receive the volume of titles it expected, and it was "... concluded that monitoring approval plan performance on an ongoing basis is essential to accurate evaluation and improved service" (Moline 1975, 21).

Perrault (1983) found the microfiche database service offered by some approval plan vendors to be a useful tool for

tracking a vendor's interpretation of a library's profile.

Karen Schmidt (1986) compared the viability of subject- and publisher-based (where the library receives all titles issued by a particular publisher) approval plans for academic libraries and found an overriding success of the publisher-based plan for domestic publications. Schmidt pointed out that regardless of how detailed and specific the arrangements in a profile are, subject-based plans have an inherent amount of subjectivity in matching subject concepts to individual titles. "Profiling" is viewed as a type of classification process, and the vendor's classification or interpretation may not be the same as that of the subject selector. "If the profiling is at all detailed, the book may be described differently from the way the selector might expect, and thus, may not be sent" (Schmidt 1986, 366). While selection occurs on many levels in a subject-based approval plan, "true selection as an intellectual process" (Schmidt 1986, 366) occurs only once in a publisher-based plan--when it is decided that a publisher will be included in the plan. Schmidt also asserted that "if the library's selectors are professionals trained in the subject area, it is unlikely a subject plan is needed for domestic publications" (Schmidt 1986, 360).

Study Evaluating Use (Circulation) of Approval Books

In a well known study, Evans (1970) looked at first-year circulation statistics for books selected by librarians, requested

by faculty members, and those supplied through direct approval plans in academic libraries in order to determine if there were differences in use (measured by circulation) according to the method of selection for acquisition. Using data from four university libraries, Evans found that, for English-language publications, books that were received on an approval plan were the least likely new titles to circulate.

Studies Identifying Subject-specific Differences in Approval Plans

When Evans and Argyres (1974) replicated their 1970 study in five other academic libraries, they found that the difference in circulation between books selected by librarians and those received on direct approval plans was greater in the sciences and humanities than in the social sciences, and that, in general, approval plans were least satisfactory in the sciences. Statistical analysis by discipline tended to support the confining of approval plans to non-scientific fields since the approval plan was consistently the least successful of the three methods of selection (i.e. librarian, faculty, or approval selection) in the science areas.

A number of other studies also alluded to science as a problem area for approval plans. McCullough, Posey, and Pickett (1977, 6) found in their survey that while just over half of the respondents indicated there were no academic areas experiencing significant problems with their approval plan, some

of those respondents who were experiencing problems indicated that the challenging areas were most often pure and applied sciences, but including art, philosophy, and psychology.

More recently, Catherine Pasterczyk (1988) studied profiles and return rates for computer science, mathematics, and geology, and while she was unable to identify an optimal method for reducing return rates for these problem areas, her study lent further support to the finding in earlier studies (McCullough et al 1977, Spyers-Duran 1980, and Treadwell 1986) that approval plans often did not work well for science and technology areas; in addition, exclusion of publishers from a profile was proposed as an effective method of eliminating the receipt of marginal materials.

It was upon this last concentration on subject areas and their suitability to approval plan profiling that this research paper focused and proceeded.

Definition of Terms

An approval plan is defined as a program contracted between a library and vendor (in this case, Wright State University Library and the wholesale bookselling company Baker & Taylor) to provide current titles soon after publication, according to the specific provisions set forth in the library's approval plan profile (see below). Return of unselected titles is permitted under an approval plan.

An approval plan vendor is defined as a wholesale bookselling company which supplies the publications of large numbers of publishers to contracted libraries on their approval program. The approval plan vendor in this study was the Baker & Taylor Company.

The approval program contracted academic library in this study was Wright State University Library.

An approval plan profile is a detailed listing of criteria setting the parameters and governing the inclusion or exclusion of titles on an approval plan. The profile defines the scope of the plan in such areas as subject matter, format, language, geographic area, level, publisher, and price. These guidelines may also be used to specify whether notification slips consisting of multi-part bibliographic slips should be sent for review or whether the book itself should be sent for each category. Libraries often specify that reprints, items that are part of a series, materials falling in a marginal category, materials of a certain format, and items falling above a certain price be sent only on notification slips, to avoid costly return. The profile is subject to review and modification as needed.

Directly- or automatically-shipped books refers to those books supplied to the library because they matched the approval plan

profile on file with the vendor.

Slip orders refers to those books received for review in response to the library's submission of notification slips (see above description in approval plan profile definition).

Both direct/automatically shipped books and books sent for review as a result of submitted notification slips were sent to Wright State University on one account (Account #U802108) and the management reports upon which this study was based covered both of these types of books. Although the reports analyze the composition for each type, the total figures for each subject station include both direct and slip order review books.[6]

Return rate is defined as those figures appearing on Baker & Taylor's report depicting the numbers of approval books returned to B & T for each subject area.

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[6]For books which were firmly ordered from notification slips (where no review of the books was desired), departmental funds were committed and the books once received were sent directly to cataloging for processing. These books were ordered on a different account (Account #U803841) and were not considered a part of this study.

METHODOLOGY

Research Design and Type of Data Collected

A two-phase observational study was conducted, using the reports of approval item return rates provided by the domestic approval plan vendor, Baker & Taylor, to the Wright State University Library. First, the report for a six-month period July through December of 1989 which preceded reprofiling sessions was examined for possible subject-related patterns with regard to return rate. Then, the report for a six-month period July through December 1990 following reprofiling was examined to see if profile adjustments were sufficient to moderate all subject areas' return rates or whether certain subject areas could be identified as being resistant to primarily subject modifications in their profiles. As stated previously, the same six-month period of each year was studied in order to try to control for budgetary concerns which might have a more significant impact on approval selection at different times in a fiscal year.

Sample copies of two pages of a Baker & Taylor report detailing return rates by subject are included in Appendix A.

The Reprofiling Procedure

Baker & Taylor analyzed Wright State University Library's return patterns in their management report, and made suggestions for profile revisions. This report analyzed by subject stations

the distribution of modifiers (publisher, place of publication, edition, subject development, textual format, and geographic designator) coded to returned books. The suggestions made were primarily to change the high return modifiers to slip[7] or to eliminate them from the profile altogether.

The Wright State University Acquisitions Librarian and a Baker & Taylor Approval Sales Representative met for reprofiling sessions with each department. In these departmental reprofiling sessions, present were the acquisitions librarian, the B & T sales representative, the WSU librarian who served as liaison with that department's faculty, and at least one faculty representative for that department (in some cases both a faculty approval plan representative and the department chair were present).

During these sessions, the B & T representative explained the profiles and B & T's suggestions for changing high return modifiers to notification slips (rather than automatic shipment of the book) or, in a few instances, eliminating them from the profiles altogether. In most instances, these suggestions were incorporated into the new profile. Attention was also paid to any changing curriculum needs within the department in adjusting

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[7]Notification slips announcing these books would be sent rather than shipping the books automatically, and the library would need to submit a copy of the slip in order to receive a copy of the book for review.

the profiles.

The result was that many descriptors were changed to notification slips and a few descriptors were eliminated altogether from the profiles.

DATA ANALYSIS

Data Collection

The data was collected for the two six-month periods for subject areas in terms of total number of books shipped for review (including both direct or automatic and slip orders), number of books shipped which were slip orders, percent of books shipped which were slip orders, number of slip orders returned, percent of slip orders returned, total number of books returned (including both direct or automatic and slip orders), total percent of returns[8] (including both direct or automatic and slip orders), and percent of total returns which were slip orders.

This data, in turn, was analyzed in the following terms: (1) ranking of subject areas with highest return rates for six-month period prior to reprofiling, (2) ranking of subject areas with highest return rates for six-month period following reprofiling, (3) identification and ranking of subject areas which experienced either higher or the same level of returns following reprofiling, and (4) increase or decrease in percent of books received on slips following reprofiling and increase or decrease

[8]returns were what percent of total books shipped

in total percent of books returned following reprofiling. This data is presented in the four following tables (see following pages).

Findings

A ranking of subject areas with the highest return rates for a six-month period before reprofiling (see Table 1) identified the following top eleven subject areas: hydraulic engineering, agronomy, machine engineering, economics of natural resources, paleontology, military science, human biology, nuclear engineering, business administration, ethics, and philosophy.

A ranking of subject areas with the highest return rates for a six-month period following reprofiling (see Table 2) identified the following top ten subject areas: chemistry, chemical engineering, materials science, agriculture, archaeology, geography, social sciences & statistics, industrial engineering, biology, and electrical engineering.

The identification and ranking of subject areas which experienced either higher or the same level of returns following reprofiling (see Table 3) revealed the following ten subjects with the highest increase in total percent of book returns following reprofiling: chemistry, chemical engineering, agriculture, materials science, archaeology, industrial engineering, world fiction, speech & speech therapy, meteorology, and physics.

All three rankings were heavily comprised of science and engineering areas, and this seemed particularly significant when it was taken into consideration that these areas were identified from a population of 117[9] subject areas. This finding lent support to the findings of Evans and Argyres (1974), McCullough, Posey, and Pickett (1977), and Pasterczyk (1988)--all of whom found problems with approval plans associated with science and technology areas.

The six month period following reprofiling also revealed a general drastic increase in number of books received as a result of notification slips being submitted.[10] However, this increase was accompanied by a notable increase in return rate for these books.[11]

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[9]The number of subject areas out of B & T's 131 subject categories which matched Wright State University's profiles.

[10]650 or 25.3% after reprofiling as opposed to 307 or 9.8% before reprofiling

[11]10.6% following reprofiling as opposed to 2.9% before reprofiling

Table 1

Ranking of subject areas with highest return rate for 6 mo. period before reprofiling (includes subjects with ≥ 50% return rate)

Subject	% of returns for 6 mo. period before reprofiling	Rank (with 1 being highest rate of return)
Hydraulic Engineering	400.0	1
Agronomy	250.0	2
Machine Engineering	200.0	3
Economics of Natural Resources	200.0	3
Paleontology	200.0	3
Military Science	200.0	3
Human Biology	160.0	4
Nuclear Engineering	133.3	5
Business Administration	133.3	5
Ethics	125.0	6
Philosophy	125.0	6
Public Health	120.0	7
Government	103.8	8
Petrology	100.0	9
Public Finance	100.0	9
Civil Engineering	100.0	9
Oceanography	100.0	9
Criminology	92.8	10
Archaeology	90.9	11
Anthropology	83.3	12
Microbiology	80.0	13
Mechanical Engineering	78.5	14
Social Sciences & Statistics	77.7	15
Sociology	77.2	16
Therapeutics	71.4	17

Table 1 (continued)

Ranking of subject areas with highest return rate for 6 mo. period before reprofiling (includes subjects with ≥ 50% return rate)

Subject	% of returns for 6 mo. period before reprofiling	Rank (with 1 being highest rate of return)
International Economics	70.3	18
Labor Economics	69.6	19
Geology	68.7	20
Biology	68.1	21
Chemistry	67.6	22
Neurology	66.6	23
Electrical Engineering	66.6	23
Economics	62.7	24
Industrial Engineering	62.5	25
Science	62.5	25
Law	62.5	25
Reprographics	62.5	25
Fine Arts	61.8	26
Materials Science	60.0	27
Medicine	60.0	27
Industrial Economics	59.2	28
Technology	58.8	29
Conservation of Natural Resources	57.1	30
History	57.1	30
Physiology	55.5	31
Accounting & Finance	55.5	31
International Relations	52.6	32
Agriculture	52.3	33
Zoology	51.8	34
Physics	51.2	35
World Fiction	50.0	36
Speech & Speech Therapy	50.0	36

Table 1 (continued)

Ranking of subject areas with highest return rate for 6 mo. period before reprofiling (includes subjects with ≥ 50% return rate)

Subject	% of returns for 6 mo. period before reprofiling	Rank (with 1 being highest rate of return)
Home Economics	50.0	36
Chemical Engineering	50.0	36
Marine Engineering	50.0	36
Animal Science	50.0	36
Nursing	50.0	36
Meteorology	50.0	36
Mineralogy	50.0	36
History of Specific Areas	50.0	36

Note: Return rate may be higher than 100% if number of books returned during a period exceeded the number of books shipped during that period.

Table 2

Ranking of subject areas with highest return rate for 6 mo. period following reprofiling (includes subjects with ≥ 50% return rate)

Subject	% of returns for 6 mo. period following reprofiling	Rank (with 1 being highest rate of return)
Chemistry	300.0	1
Chemical Engineering	200.0	2
Materials Science	200.0	2
Agriculture	200.0	2
Archaeology	200.0	2
Geography	188.8	3
Social Sciences & Statistics	114.2	4
Industrial Engineering	112.5	5
Biology	108.3	6
Electrical Engineering	105.0	7
U.S. Government	103.8	8
Physiology	100.0	9
World Fiction	100.0	9
Mining Engineering	100.0	9
Metallurgy	100.0	9
Speech & Speech Therapy	100.0	9
Electronic Engineering	100.0	9
Mechanical Engineering	100.0	9
Environmental Engineering	100.0	9
Zoology	100.0	9
Meteorology	100.0	9
Physics	100.0	9
Science	100.0	9
Labor Economics	100.0	9
Music	100.0	9
Communication	80.0	10
History	79.3	11
Medicine	78.5	12

Table 2 (continued)

Ranking of subject areas with highest return rate for 6 mo. period following reprofiling (includes subjects with ≥ 50% return rate)

Subject	% of returns for 6 mo. period following reprofiling	Rank (with 1 being highest rate of return)
Microbiology	75.0	13
Industrial Economics	75.0	13
Conservation of Natural Resources	75.0	13
Business Administration	72.4	14
Accounting & Finance	71.4	15
International Economics	70.5	16
Criminology	69.2	17
Home Economics	66.6	18
Aeronautical Engineering	66.6	18
Military Science	66.6	18
Geology	63.6	19
Philosophy	60.3	20
Law	60.0	21
Journalism	60.0	21
Sociology	56.2	22
Computer Science	55.9	23
Economics	54.8	24
Botany	54.5	25
Anthropology	54.5	25
Ethics	53.8	26
Fine Arts	53.6	27
Machine Engineering	50.0	28
Hydraulic Engineering	50.0	28
Technology	50.0	28
Astronomy	50.0	28

Note: Return rate may be higher than 100% if number of books returned during a period exceeded the number of books shipped during that period.

Table 3

Identification and ranking of subject areas which experienced either higher or same level of returns following reprofiling (includes subjects with ≥50% return rate before reprofiling)

Subject	Increase in total % of books returned following reprofiling	Rank (with 1 being highest increase in total % of books returned following reprofiling
Chemistry	232.4	1
Chemical Engineering	150.0	2
Agriculture	147.7	3
Materials Science	140.0	4
Archaeology	109.1	5
Industrial Engineering	50.0	6
World Fiction	50.0	6
Speech & Speech Therapy	50.0	6
Meteorology	50.0	6
Physics	48.8	7
Zoology	48.2	8
Physiology	44.5	9
Biology	40.2	10
Electrical Engineering	38.4	11
Science	37.5	12
Social Sciences & Statistics	36.5	13
Labor Economics	30.4	14
History	22.2	15
Mechanical Engineering	21.5	16
Medicine	18.5	17
Conservation of Natural Resources	17.9	18
Home Economics	16.6	19
Accounting & Finance	15.9	20
Industrial Economics	15.8	21
International Economics	.2	22

Table 4

Increase or decrease in percent of books received on slips and in total percent of books returned following reprofiling

Subject	Increase or decrease in % of books received on slips following reprofiling	Increase or decrease in total % of books returned following reprofiling
General Works	+ 18.2	+ 18.2
Fine Arts	- 1.4	- 8.2
Art Media	- .6	+ 4.4
Reprographics	+ 7.6	- 31.8
Performing Arts	+ 1.5	+ 9.9
Music	+ 20.3	+ 61.7
Sports	+ 17.7	+ 3.1
Philosophy	+ 46.2	- 64.7
Psychology	- 6.2	+ 12.4
Clinical Psychology	- 59.1	- .6
Religion	+ 31.9	- .2
History	+ .9	+ 22.2
History of Specific Areas	+ 5.8	- 3.0
United States History	+ 3.3	+ 22.5
Archaeology	0	+109.1
Geography	+ 24.4	+155.5
Language	- 20.0	+ 8.5
English Language	- .5	- 19.7
Linguistics	+ 16.6	+ 11.1
Literature	+ 2.2	- 10.8
World Literature	+ 27.3	+ 26.5
English Literature	0	- 8.0
American Literature	0	+ 11.3
Journalism	+ 20.0	+ 43.4
Library and Information Science	+ 23.9	- 38.8

Table 4 (continued)

Increase or decrease in percent of books received on slips and in total percent of books returned following reprofiling

Subject	Increase or decrease in % of books received on slips following reprofiling	Increase or decrease in total % of books returned following reprofiling
Social Sciences & Statistics	0	+ 36.5
Sociology	+ 12.6	- 21.0
Regional Planning	+ 41.6	+ 1.6
Anthropology	0	- 28.8
Communication	- 2.2	+ 48.2
Education	+ 33.5	- 11.7
Law	+ 36.9	- 2.5
Political Science	+ 15.0	+ 1.0
Government	+ 22.2	- 63.1
U.S. Government	+ 30.7	+ 68.6
International Relations	+ 19.6	- 33.0
Military Science	+100.0	-133.4
Economics	+ 20.6	- 7.9
Labor Economics	+ 23.5	+ 30.4
Financial Economics	+ 11.4	+ 12.8
Business Administration	+ 3.4	- 60.9
International Economics	+ 5.8	+ .2
Science	- 12.5	+ 37.5
Mathematics	+ 10.7	+ 11.0
Astronomy	+ 50.0	+ 50.0
Physics	- 7.6	+ 48.8
Chemistry	0	+232.4
Mineralogy	+ 50.0	- 50.0
Geology	+ 39.2	- 5.1
Oceanography	+100.0	-100.0
Meteorology	+ 33.3	+ 50.0
Paleontology	+ 28.5	-157.2

Table 4 (continued)

Increase or decrease in percent of books received on slips and in total percent of books returned following reprofiling

Subject	Increase or decrease in % of books received on slips following reprofiling	Increase or decrease in total % of books returned following reprofiling
Biology	- .7	+ 40.2
Conservation of Natural Resources	+ 25.0	+ 17.9
Botany	- 23.5	+ 36.9
Zoology	+ 2.1	+ 48.2
Human Biology	+ 5.0	-135.0
Medicine	- 3.8	+ 18.5
Public Health	+ 2.2	- 97.8
Psychiatry	+ 2.5	+ 9.0
Pharmacological Sciences	0	+ 33.3
Agriculture	+ 50.0	+147.7
Forestry	+100.0	0
Technology	+ 16.6	- 8.8
Materials Science	+ 33.3	+140.0
Civil Engineering	+100.0	-100.0
Environmental Engineering	+ 23.0	+ 52.7
Mechanical Engineering	+ 12.5	+ 21.5
Aeronautical Engineering	+ 33.3	+ 41.6
Electrical Engineering	+ 15.0	+ 38.4
Electronic Engineering	+ 27.2	+ 53.9
Computer Science	+ 6.8	+ 17.9
Chemical Engineering	0	+150.0
Home Economics	- 12.5	+ 16.6
Cinema	- 5.4	+ 1.0
Speech & Speech Therapy	0	+ 50.0
Criminology	- 6.1	- 23.6
Ethics	+ 18.2	- 71.2
Accounting & Finance	+ 4.7	+ 15.9

Table 4 (continued)

Increase or decrease in percent of books received on slips and in total percent of books returned following reprofiling

Subject	Increase or decrease in % of books received on slips following reprofiling	Increase or decrease in total % of books returned following reprofiling
Industrial Engineering	+ 12.5	+ 50.0
Hydraulic Engineering	+100.0	-350.0
Industrial Economics	+ 12.5	+ 15.8
Internal Medicine	- 11.9	- 21.4
Higher Education	+ 9.1	- 8.1
Economics of Natural Resources	0	-175.0
Microbiology	0	- 5.0
Metallurgy	0	+ 55.6
Machine Engineering	+ 50.0	-150.0
Mining Engineering	0	+100.0
Neurology	0	- 66.6
Physical Education	0	0
World Fiction	+ 28.5	+ 50.0
English Fiction	0	+ 3.5
American Fiction	0	+ 26.6
Public Finance	+ 7.6	- 69.3
Physiology	- 33.3	+ 44.5
Recreation	0	0
Special Branches of Medicine	+ 33.4	- 44.4
Therapeutics	+ 29.9	- 53.3
American Contemporary Poet	+ 1.3	+ 16.1
Social Welfare	- .1	- 17.9
Overall	+ 13.8	+ .9

DISCUSSION AND RECOMMENDATIONS FOR FURTHER STUDY

Return Rates Were High, Both Before and After Reprofiling

The reprofiling efforts were not sufficient to moderate the level of returns for the problem subject areas identified. The results identified a number of science and engineering areas as among those experiencing high rates of return both before and after reprofiling. Many of these same subjects, in fact, experienced an increase in return rate following reprofiling. As shown in Table 3, 25 of the 60 subjects (or 42%) which had an overall return rate $\geq 50\%$ before reprofiling experienced either higher or the same level of returns following reprofiling.

Although science and engineering subjects predominated in the lists of subjects experiencing high return rates both before and after reprofiling, the subjects originally identified as having the highest return rates did experience significantly lower return rates following reprofiling. Most of those return rates were still extremely high, however.

Out of the twenty-one subject areas identified as having the highest return rates before reprofiling, all but one (archaeology) experienced a reduction in return rate following reprofiling. However, a correlated t-test compared before and after reprofiling return rates for all subject areas identified as having $\geq 50\%$ return rates before reprofiling, and no significant difference in their means was found at the $\alpha = .05$ level.

(See Appendix D.) In addition, only 29 subjects out of the 54 or 53.7% had lower return rates following reprofiling, and only 4 out of those 54 subjects had return rates less than 18%[12] following reprofiling.

Overall (including both books sent automatically because they matched the library's direct ship profile and books sent for review in response to submitted notification slips), 568 fewer books were sent in the six-month period following reprofiling (2,568 as opposed to 3,136 for the six-month period prior to reprofiling). But, the overall return rate was in fact slightly higher following reprofiling (44.0% as opposed to 43.1% before reprofiling). Out of the 117 subject areas, 61 or 52% experienced either higher or the same level of returns following reprofiling.

A correlated t-test compared before and after reprofiling return rates for all subject areas and found no statistical difference in their means at the $\alpha = .05$ level. (See Appendix E.) Only 17 out of 101[13] subjects or 16.8% had return rates less

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[12]Even this figure would be considered unacceptably high according to the standards set forth in the literature reviewed for this study which expressed that return rates of no more than 10-15% should be condoned.

[13]Out of the 117 subjects analyzed before reprofiling, 16 of the subjects received no books following reprofiling, so the correlation analysis did not include those 16 subjects.

than 18% before reprofiling; 19 out of 101 or 18.8% had return rates less than 18% following reprofiling.

The high return rates would generally indicate that the profiles were too broad. Although another consideration in addition to scope would be the accuracy and appropriateness of the profiles. As Schmidt (1986) suggested, "profiling" is a subjective process and vendors and libraries may not interpret profiles and descriptors in the same way. This can lead to errors and misunderstandings associated with the profiles.

Increase in Books Received For Review As a Result of Submission of Notification Slips

An additional finding was that more than twice as many books were shipped as a result of submitted notification slips following reprofiling (650 as opposed to 307 prior to reprofiling). These slip orders accounted for only 9.8% (307 out of 3,136) of all books sent before reprofiling, but jumped to over 25% (650 out of 2,568) of all books sent on the approval account following reprofiling.

The percentage of books ordered for review from notification slips following reprofiling exceeded 10% in many categories. This indicated that the profiles for direct ship in these areas may have been too narrow to obtain all the desired books, resulting in unnecessary paperwork and delay in obtaining the books in ordering the book (either through a firm order or

submission of a notification slip rather than automatic receipt of a book matching the library's direct ship profile). It might also have indicated a lack of discrimination in reviewing and submitting notification slips, resulting in many books being shipped which were inappropriate for the collection.

In addition, the increase in percentage of books received for review as a result of submission of notification slips was accompanied by a notable increase in return rate for these books. The overall return rate for books received as a result of submission of notification slips was 2.9% before reprofiling; it increased to 10.6% following reprofiling. The percent of total returns which were returns of books which had been received for review as a result of submission of notification slips also went up--from .66% (9 out of 1,354) to 6% (69 out of 1,132) following reprofiling.

This was particularly noteworthy since these books typically experience a much lower return rate than do direct ships.[14] Although this might again be partially attributed to a lack of discrimination in reviewing and submitting notification slips, it also brought into question not only the matter as to how appropriate the new profiles were, but also whether all books had been reviewed before being returned.

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[14]presumably because a potential selector has already expressed at least some interest in the book by requesting that it be sent for review

The Review of Approval Plan Books

While the instruction from the acquisitions librarian to the faculty and library representatives was that they should review the approval plan books "at least every other week," in reality, there was much variation in review practices. Departments for which it was suspected[15] that some books might have been returned without having been reviewed included business, chemistry, history, music, and political science--so the return rates for these areas might need to be interpreted with caution. Biology, Classics, education, English, and physics, on the other hand, were known to have been reviewed with particular regularity--so these variations in performance should be given much credence. Computer science continued to receive books even though faculty stopped reviewing them because that department had run out of funds[16]--so not all of that area's returns could be attributed to profile problems.

As an outgrowth of these selection problems (but after the time of this study), Wright State University Library implemented

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[15]In practice, many departments would make no mark on internal review slips unless they selected a book, so it could not be determined for sure whether an approval book with a blank review slip had been rejected or never reviewed.

[16]These books continued to be reviewed by the library representative who had the responsibility for undergraduate funds in this area, however.

a new process for reviewing approval plan materials. Collection development librarians were appointed to review the books on the approval shelves on a weekly basis (and also to "sign off" on all books either accepted or rejected by faculty); this ensured that all approval books would at least be reviewed before they were rejected and returned.

Questions as to the Accuracy and Appropriateness of the Profiles

It has already become apparent that this new review process has reduced the number of returns. However, there remains the problem of the new profiles. At least one error in reprofiling was brought to light when it was discovered that the new profile brought in books of "recreational fiction" which were not considered appropriate for Wright State's academic collection. Although this particular problem has been corrected, there may still be other problem areas or misunderstandings remaining in the profiles.[17] Some faculty members have also complained that they "are not getting any books," and the comprehensiveness and scope of the new profiles has been questioned. So, while the return rates might be expected to be much lower now that all of the approval books are at least definitely being

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[17]As suggested by Schmidt (1986), "profiling" is a subjective process and vendor and library interpretations of profiles and descriptors may not be the same. (See the presentation of Schmidt's views in the "Studies Evaluating Comprehensiveness and Appropriateness of Approval Profiles" section in the Literature Review of this study.)

reviewed and since fewer books are being received, there remains the matter of whether or not the new profiles might not be too narrow so that all appropriate materials are not being brought in; it is a fine line, and, as pointed out in the review of the literature, an issue of much debate.

Summary and Conclusions

Returning to the researcher's original research question as to whether there are subject areas which may inherently not be well-suited to approval plans (i.e., are prone to experience higher rates of return), the preliminary suggestion was that some science and engineering areas fell into that category at Wright State University Library. In addition, although most of the highest return rates were reduced following reprofiling, they still generally remained quite high. These findings lent support to the findings of Evans and Argyres (1974), McCullough, Posey, and Pickett (1977), and Pasterczyk (1988)--all of whom identified problems with approval plans associated with science and technology areas.

However, the return rates for most subject areas were poor both before and after reprofiling. And, considering the internal (i.e., in-library) factors that appeared to come into play in this specific instance (viz., whether all the books were reviewed, as well as questions regarding the accuracy and appropriateness of the profiles themselves), while a trend

might have been indicated, the researcher hesitated to assert a definitive connection.

Recommendations for Further Study

Once the internal review and selection process has been more controlled by the newly appointed collection development librarians, perhaps additional studies could address this subject-based issue, investigating possible problems of vendor interpretation and matching of library needs as expressed in the approval plan profiles, as well as factors possibly associated with the inherent nature of the subjects.

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ACCT U802108 WRIGHT STATE UNIV ATTN: KATHY O'GORMAN

RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR WRIGHT STATE 11 RPT-PERIOD JUL-89 THRU DEC-89

STATION	SUBJECT	DESCRIPTOR	SHP-QTY	LST-PRC	NET-PRC	AVG-NET	SLP-ORD	PCTG	RTRND	PCTG	COMM
N		FINE ARTS (GENERAL)	1	35.00	28.70	28.70					
N		PHILOSOPHY OF ART	2	54.95	45.06	22.53					
N		PSYCHOLOGY OF ART	1	40.00	32.80	32.80	1	100.0			
N		ART CRITICISM	1	25.00	20.50	20.50					
N		ICONOGRAPHY (FINE ARTS)	1	39.95	32.76	32.76					
N		ART AND SOCIETY	3	114.00	93.48	31.16			1	33.3	
N		ART MUSEUMS AND GALLERIES	1	25.00	20.50	20.50			2	200.0	
N		EXHIBITION CATALOGS	38	1,507.40	1,236.08	32.52			26	68.4	
N		PRESERVATION AND RESTORAT	2	200.00	164.00	82.00			1	50.0	
N		HISTORY OF FINE ARTS	2	65.00	53.30	26.65			1	50.0	
N		CLASSIC ART	1	135.00	102.50	102.50					
N		MEDIEVAL ART	1	32.50	26.65	26.65					
N		EARLY CHRISTIAN AND BYZAN	1	35.00	28.70	28.70			1	100.0	
N		GOTHIC ART	1	59.50	48.79	48.79					
N		MODERN ART	2	84.95	69.66	34.83			2	100.0	
N		15TH-16TH CENTURY ART	2	110.00	90.20	45.10					
N		19TH CENTURY ART	3	125.00	102.50	34.16					
ND		IMPRESSIONISM		.00	.00				1		
N		20TH CENTURY ART	8	353.30	294.22	36.77	1	12.5	6	75.0	
N		SPECIAL SUBJECTS IN ART	2	94.50	73.35	36.67			4	200.0	
N		ISLAMIC ART	2	135.00	110.70	55.35			1	50.0	

Sample of Page from Baker & Taylor Management Report

APPENDIX A

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ACCT U802108 WRIGHT STATE UNIV ATTN: KATHY O'GORMAN

RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR WRIGHT STATE 11 RPT-PERIOD JUL-89 THRU DEC-89

STATION	SUBJECT	DESCRIPTOR	SHP-QTY	LST-PRC	NET-PRC	AVG-NET	SLP-ORD	PCTG	RTRND	PCTG	COMM
N		AMERICAN PRE-COLUMBIAN AR		.00	.00				1		
N		NATIVE AMERICAN ART	1	16.95	13.90	13.90					
		NONRETURNABLE SUMMARY		.00	.00						
		NOTIFICATION SLIP SUMMARY	2	74.95	61.46	30.73	2	100.0			
		TOTAL N FINE ARTS	76	3,288.00	2,688.35	35.37	2	2.6	47	61.8	

APPENDIX A (continued)

ACCT -U802108 --WRIGHT-STATE-UNIV ATTN: KATHY O'GORMAN

RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR WRIGHT STATE 11 RPT-PERIOD JUL-89 THRU DEC-89

STATION---SUBJECT---DESCRIPTOR	SHP-QTY	LST-PRC	NET-PRC	AVG-NET	SLP-ORD	PCTG	RTRND	PCTG	COMM
NONRETURNABLE SUMMARY	46	1,417.26	1,151.48	25.03	46	100.0	6	13.0	
NOTIFICATION SLIP SUMMARY	307	9,066.27	7,414.41	24.15	307	100.0	9	2.9	
TOTAL THIS CUSTOMER OR GROUP	3,136	114,324.57	93,357.69	29.76	307	9.7	1,354	43.1	

ACCT U802108 WRIGHT STATE UNIV *** MANAGEMENT REPORT *** RPT-PERIOD JUL-89 THRU DEC-89

TOTAL ALL STATIONS SHPD 3,136 R-N-SLIP-ORDS 307 PCT-R-N 9.7 RTRN-QTY 1,354 RTRN-PCTG 43.1

*** RETURN REASON ***

A	54	E	9	I	2	M	15	Q	1
B	2	F	140	J	4	N		R	
C		G	40	K	19	O	1	S	
D	1	H	38	L	3	P	4	T	

*** RETURN CODE DISTRIBUTION ***

A01	853	C01	1348	E01	1111	F03	5	G05	8	H07	50	I06		J06	14
A02	418	C02		E02	231	F04	23	G06		H08		I07	161	J07	22
A03	7	C03		E03	5	F05	20			H09		I08	23	J08	35
A04	70	C04		E04	1	F06	5	H01	12					J09	19
				E05				H02	28	I01	495	J01	175	J10	25
B01	1243	D01	1245	E06		G01	191	H03	8	I02	474	J02	5	J11	13
B02	1	D02	101			G02	31	H04	5	I03	31	J03	38	J12	
B03	11	D03	74	F01	16	G03	44	H05	60	I04	11	J04	19	J13	4
B04	1	D04	2	F02	26	G04	11	H06	10	I05		J05	46		

APPENDIX [52]

Baker & Taylor Management Report section identifying total figures for activity on Approval account for July through December 1989

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ACCT U802108 WRIGHT STATE UNIV ATTN. KATHY O'GORMAN

RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR WRIGHT STATE/RON NIMMER RPT-PERIOD JUL-90 THRU DEC-90

STATION---SUBJECT---DESCRIPTOR	SHP-QTY	LST-PRC	NET-PRC	AVG-NET	SLP-ORD	PCTG	RTRND	PCTG	COMM
NONRETURNABLE SUMMARY	66	2,123.18	1,726.90	26.16	66	100.0	8	12.1	
NOTIFICATION SLIP SUMMARY	650	21,207.49	17,349.81	26.69	606	93.2	69	10.6	
TOTAL THIS CUSTOMER OR GROUP	2,568	91,359.82	74,814.79	29.13	606	23.5	1,132	44.0	

ACCT U802108 WRIGHT STATE UNIV *** MANAGEMENT REPORT *** RPT-PERIOD JUL-90 THRU DEC-90

TOTAL ALL STATIONS SHPD 2,568 R-N-SLIP-ORDS 606 PCT-R-N 23.5 RTRN-QTY 1,132 RTRN-PCTG 44.0

*** RETURN REASON ***

A	40	E	2	I	20	M	12	Q	2	A01	812	C01	1131	E01	900	F03	2	G05	7	H07	52	I06		J06	23
B	10	F	168	J	9	N	2	R	161	A02	258	C02		E02	226	F04	9	G06	8	H08		I07	139	J07	7
C		G	29	K	25	O	3	S		A03	14	C03	1	E03	3	F05	18			H09		I08	15	J08	21
D		H	58	L	6	P	6	T		A04	48	C04		E04	2	F06	4	H01	10					J09	2
														E05				H02	21	I01	465	J01	132	J10	14
										B01	1075	D01	1051	E06	1	G01	165	H03	5	I02	359	J02	7	J11	6
										B02		D02	80			G02	23	H04	4	I03	31	J03	15	J12	
										B03		D03	60	F01	12	G03	48	H05	63	I04	28	J04	17	J13	12
										B04	3	D04	1	F02	34	G04	14	H06	10	I05	3	J05	52		

APPENDIX C [53]

Baker & Taylor Management Report section identifying total figures for activity on Approval account for July through December 1990

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OBS	TRT1	TRT2	DIFF
1	400.0	50.0	350.0
2	200.0	50.0	150.0
3	200.0	25.0	175.0
4	200.0	42.8	157.2
5	200.0	66.6	133.4
6	160.0	25.0	135.0
7	133.3	72.4	60.9
8	125.0	53.8	71.2
9	125.0	60.3	64.7
10	120.0	22.2	97.8
11	103.8	40.7	63.1
12	100.0	30.7	69.3
13	100.0	0.0	100.0
14	100.0	0.0	100.0
15	92.8	69.2	23.6
16	90.9	200.0	-109.1
17	83.3	54.5	28.8
18	80.0	75.0	5.0
19	78.5	100.0	-21.5
20	77.7	114.2	-36.5
21	77.2	56.2	21.0
22	71.4	18.1	53.3
23	70.3	70.5	-0.2
24	69.6	100.0	-30.4
25	68.7	63.6	5.1
26	68.1	108.3	-40.2
27	67.6	300.0	-232.4
28	66.6	0.0	66.6
29	66.6	105.0	-38.4
30	62.7	54.8	7.9
31	62.5	112.5	-50.0
32	62.5	100.0	-37.5
33	62.5	60.0	2.5
34	62.5	30.7	31.8
35	61.8	53.6	8.2
36	60.0	200.0	-140.0
37	60.0	78.5	-18.5
38	59.2	75.0	-15.8
39	58.8	50.0	8.8
40	57.1	75.0	-17.9
41	57.1	79.3	-22.2
42	55.5	100.0	-44.5
43	55.5	71.4	-15.9
44	52.6	19.6	33.0
45	52.3	200.0	-147.7
46	51.8	100.0	-48.2
47	51.2	100.0	-48.8
48	50.0	100.0	-50.0
49	50.0	100.0	-50.0
50	50.0	66.6	-16.6
51	50.0	200.0	-150.0
52	50.0	100.0	-50.0
53	50.0	0.0	50.0
54	50.0	47.0	3.0

Appendix D

~~Correlated t-test~~ compared before and after reprofiling ~~return rates for all~~ subjects identified as having $\geq$ 50% return rates before reprofiling

Analysis Variable : DIFF

T	Prob>|T|
0.9513292	0.3458

Appendix E

The SAS System

Correlated t-test compared before and after reprofiling return rates for all subject categories

OBS	TRT1	TRT2	DIFF
1	18.1	36.3	-18.2
2	61.8	53.6	8.2
3	36.7	41.1	-4.4
4	62.5	30.7	31.8
5	11.1	21.0	-9.9
6	38.3	100.0	-61.7
7	4.0	7.1	-3.1
8	125.0	60.3	64.7
9	33.9	46.3	-12.4
10	14.2	13.6	0.6
11	41.4	41.2	0.2
12	57.1	79.3	-22.2
13	50.0	47.0	3.0
14	26.3	48.8	-22.5
15	90.9	200.0	-109.1
16	33.3	188.8	-155.5
17	20.0	28.5	-8.5
18	33.3	13.6	19.7
19	0.0	11.1	-11.1
20	25.5	14.7	10.8
21	11.1	37.6	-26.5
22	26.3	18.3	8.0
23	21.5	32.8	-11.3
24	16.6	60.0	-43.4
25	38.8	0.0	38.8
26	77.7	114.2	-36.5
27	77.2	56.2	21.0
28	25.0	26.6	-1.6
29	83.3	54.5	28.8
30	31.8	80.0	-48.2
31	23.3	11.6	11.7
32	62.5	60.0	2.5
33	44.0	45.0	-1.0
34	103.8	40.7	63.1
35	35.2	103.8	-68.6
36	52.6	19.6	33.0
37	200.0	66.6	133.4
38	62.7	54.8	7.9
39	69.6	100.0	-30.4
40	19.4	32.2	-12.8
41	133.3	72.4	60.9
42	70.3	70.5	-0.2
43	62.5	100.0	-37.5
44	3.6	14.6	-11.0
45	0.0	50.0	-50.0
46	51.2	100.0	-48.8
47	67.6	300.0	-232.4
48	50.0	0.0	50.0
49	68.7	63.6	5.1
50	100.0	0.0	100.0
51	50.0	100.0	-50.0
52	200.0	42.8	157.2
53	68.1	108.3	-40.2
54	57.1	75.0	-17.9
55	17.6	54.5	-36.9
56	51.8	100.0	-48.2

Appendix E (continued)

The SAS System

OBS	TRT1	TRT2	DIFF
57	160.0	25.0	135.0
58	60.0	78.5	-18.5
59	120.0	22.2	97.8
60	5.2	14.2	-9.0
61	0.0	33.3	-33.3
62	52.3	200.0	-147.7
63	0.0	0.0	0.0
64	58.8	50.0	8.8
65	60.0	200.0	-140.0
66	100.0	0.0	100.0
67	47.3	100.0	-52.7
68	78.5	100.0	-21.5
69	25.0	66.6	-41.6
70	66.6	105.0	-38.4
71	46.1	100.0	-53.9
72	38.0	55.9	-17.9
73	50.0	200.0	-150.0
74	50.0	66.6	-16.6
75	11.7	12.7	-1.0
76	50.0	100.0	-50.0
77	92.8	69.2	23.6
78	125.0	53.8	71.2
79	55.5	71.4	-15.9
80	62.5	112.5	-50.0
81	400.0	50.0	350.0
82	59.2	75.0	-15.8
83	44.4	23.0	21.4
84	18.1	10.0	8.1
85	200.0	25.0	175.0
86	80.0	75.0	5.0
87	44.4	100.0	-55.6
88	200.0	50.0	150.0
89	0.0	100.0	-100.0
90	66.6	0.0	66.6
91	0.0	0.0	0.0
92	50.0	100.0	-50.0
93	25.0	28.5	-3.5
94	12.5	39.1	-26.6
95	100.0	30.7	69.3
96	55.5	100.0	-44.5
97	0.0	0.0	0.0
98	44.4	0.0	44.4
99	71.4	18.1	53.3
100	6.4	22.5	-16.1
101	30.0	12.1	17.9

Analysis Variable : DIFF

T	Prob>|T|
-0.2797337	0.7803